AMENDMENTS TO THE CLAIMS

19-49. (Cancelled)

50. (Currently Amended) A method of during the manufacture of a slider member to be used in sliding relation to an other member, forming micro-protrusions on or micro-cavities in a surface of a substrate from which is formed ~~said~~ the slider member~~,~~ in a manner to reduce sticking between ~~said~~ the surface and the other member and to reduce entrapment of foreign particles therebetween, said method comprising:

placing ~~said~~ the substrate in a process chamber;

supporting a mask member in front of ~~said~~ the surface of ~~said~~ the substrate, ~~said~~ the mask member disposed in contact with or in proximity of ~~said~~ the substrate surface, and the mask member having a plurality of cavities arranged as a matrix-type on a plate;

irradiating fast atomic beams through ~~said~~ the mask member onto ~~said~~ the surface of ~~said~~ the substrate, and ~~thereby~~ forming ~~said~~ the micro-protrusions or ~~said~~ the micro-cavities, said forming comprising controlling said irradiating such that each micro-protrusion or micro-cavity has a top or bottom surface, respectively, and a side surface, with ~~said~~ the side surface extending at an inclusive angle of from approximately 80° to approximately 110° to an intended direction of sliding of ~~said~~ the slider member relative to the other member and to ~~said~~ the surface of ~~said~~ the substrate, wherein the micro-protrusions or micro-cavities have a height or depth ranging from 10 to 50 nm and 10 to 1,000,000 micro-protrusions or micro-cavities are formed on a $1mm^2$ surface of the substrate; and

forming a magnetic film layer and a protective film layer on ~~said~~ the micro-protrusions or ~~said~~ the micro-cavities.

51. (Currently Amended) A method as claimed in claim 50, wherein ~~said~~ the mask member has a plurality of openings arranged in a matrix-type array formed on a plate.

52. (Currently Amended) A method as claimed in claim 51, wherein ~~said~~ the opening is circular-shaped, oval-shaped, ~~squire-shaped~~ square-shaped or honeycomb-shaped.

53. (Currently Amended) A method as claimed in claim 51, wherein ~~said~~ the opening is rhombus-shaped or hexagonal-shaped.

54. (Currently Amended) A method as claimed in claim 50, wherein ~~said~~ the slider member comprises a magnetic disc or a magnetic head.

55. (Currently Amended) A method as claimed in claim 50, wherein ~~said~~ the surface of the substrate comprises glass.

56. (Currently Amended) A method as claimed in claim 50, wherein said irradiating comprises directing, ~~said~~ the fast atomic beams from a beam source at an angle of incidence determined by an angle of inclination measured with respect to a rotation axis normal to ~~said~~ the surface of ~~said~~ the substrate, and rotating one of ~~said~~ the beam source and ~~said~~ the substrate about ~~said~~ the rotation axis relative to the other of ~~said~~ the beam source and ~~said~~ the substrate.

57. (Currently Amended) A method as claimed in claim 50, wherein said irradiating comprises a first irradiation operation of irradiating ~~said~~ the fast atomic beams through a first mask member comprising parallel wires or rods disposed adjacent to ~~said~~ the surface of ~~said~~ the substrate, and a second irradiation operation of irradiating ~~said~~ the fast atomic beams through a second mask member comprising parallel wires or rods disposed adjacent to ~~said~~ the surface of ~~said~~ the substrate.

58. (Currently Amended) A method as claimed in claim 50, wherein ~~said~~ the protective layer comprises carbon, SiO_2, or ceramic material.

59. (Currently Amended) A method as claimed in claim 50, wherein said irradiating comprises directing ~~said~~ the fast atomic beams substantially at a right angle onto ~~said~~ the surface of ~~said~~ the substrate.

60. (Currently Amended) A method as claimed in claim 50, wherein ~~said~~ the angle is from approximately 90° to approximately 110°.

61. (Currently Amended) A method as claimed in claim 50, wherein ~~said~~ the angle is from approximately 80° to approximately 90°.

62. (Currently Amended) A method as claimed in claim 50, wherein ~~said~~ the angle is substantially 90°.

63. (Currently Amended) A method as claimed in claim 50, wherein ~~said~~ the mask member comprises micro-objects dispersed on ~~said~~ the surface of ~~said~~ the substrate.

64. (Currently Amended) A method as claimed in claim 63, wherein ~~said~~ the micro-objects comprise micro-particles of powder.

65. (Currently Amended) A method as claimed in claim 63, wherein ~~said~~ the micro-objects are formed from at least one material selected from the group consisting of alumina, carbon, Si_3N_4, SiC, TiN, ZrO_2, MgO and synthetic resin.

66. (Currently Amended) A method as claimed in claim 64, wherein ~~said~~ the micro-objects are susceptible to etching by ~~said~~ the fast atomic beams.

67. (Currently Amended) A method as claimed in claim 64, wherein ~~said~~ the micro-objects are not susceptible to etching by ~~said~~ the fast atomic beams.

68. (Currently Amended) A method as claimed in claim 50, wherein ~~said~~ <u>the</u> mask member comprises a plurality of fine wire or rod members disposed adjacent ~~said~~ <u>the</u> surface of ~~said~~ <u>the</u> substrate.

69. (Currently Amended) A method as claimed in claim 68, wherein ~~said~~ <u>the</u> plurality of wire or rod members extend parallelly.

70. (Currently Amended) A method as claimed in claim 68, wherein ~~said~~ <u>the</u> plurality of wire or rod members are arranged to form a matrix.

71. (Currently Amended) A method as claimed in claim 50, wherein ~~said~~ <u>the</u> micro-protrusions or micro-cavities have a height or depth of approximately 10nm.

72. (Currently Amended) A method of, during the manufacture of a slider member to be used in sliding relation to an other member, forming micro-protrusions on or micro-cavities in a surface of ~~said~~ <u>the</u> slider member in a manner to reduce sticking between ~~said~~ <u>the</u> surface and the other member and to reduce entrapment of foreign particles therebetween, said method comprising:

depositing a protective film layer on a substrate;

placing ~~said~~ <u>the</u> substrate in a process chamber;

supporting a mask member in front of ~~said~~ <u>the</u> surface of ~~said~~ <u>the</u> protective film layer, ~~said~~ <u>the</u> mask member disposed in contact with or in proximity of ~~said~~ <u>the</u> surface<u>, and the mask member having a plurality of cavities arranged as a matrix-type on a plate</u>;

irradiating fast atomic beams through ~~said~~ <u>the</u> mask member onto ~~said~~ <u>the</u> surface of ~~said~~ <u>the</u> protective film layer, and ~~thereby~~ forming ~~said~~ <u>the</u> micro-protrusions or ~~said~~ <u>the</u> micro-cavities, said forming comprising controlling said irradiating such that each micro-protrusion or micro-cavity has a top or bottom surface, respectively, and a side surface, with ~~said~~ <u>the</u> side surface extending at an inclusive angle of from approximately 80° to approximately 110° to an intended direction of sliding of ~~said~~ <u>the</u> slider member relative to the other member<u> and to the surface of the substrate, wherein</u>

the micro-protrusions or micro-cavities have a height or depth ranging from 10 to 50 nm and 10 to 1,000,000 micro-protrusions or micro-cavities are formed on a 1 mm^2 surface of the substrate.

73. (Currently Amended) A method as claimed in claim 72, wherein ~~said~~ the protective layer comprises carbon, SiO_2, or ceramic material.

74. (Previously presented) A method as claimed in claim 72, wherein a magnetic film layer is formed between the protective film layer and the substrate.

75. (Currently amended) A method of, during the manufacture of a slider member to be used in sliding relation to an other member, forming micro-protrusions on or micro-cavities in a surface of a substrate from which is formed ~~said~~ the slider member, in a manner to reduce sticking between ~~said~~ the surface and the other member and to reduce entrapment of foreign particles therebetween, said method comprising:

placing ~~said~~ the substrate in a process chamber, wherein ~~said~~ the substrate has a smooth curved sliding surface;

supporting a mask member in front of ~~said~~ the surface of ~~said~~ the substrate, ~~said~~ the mask member disposed in contact with or in proximity of a portion of ~~said~~ the substrate surface, and the mask member having a plurality of cavities arranged as a matrix-type on a plate;

irradiating fast atomic beams through ~~said~~ the mask member onto ~~said~~ the surface of ~~said~~ the substrate, and thereby forming ~~said~~ the micro-protrusions or ~~said~~ the micro-cavities, said forming comprising controlling said irradiating such that each micro-protrusion or micro-cavity has a top or bottom surface, respectively, and a side surface, with ~~said~~ the side surface extending at an inclusive angle of from approximately 80° to approximately 110° to an intended direction of sliding of ~~said~~ the slider member relative to the other member, wherein the micro-protrusions or micro-cavities have a height or depth ranging from 10 to 50 nm and 10 to 1,000,000 micro-protrusions or micro-cavities are formed on a 1mm^2 surface of the substrate.

76. (Currently Amended) A method as claimed in claim 75, wherein ~~said~~ the slider member comprises a magnetic head.

77. (Currently Amended) A method as claimed in claim 75, further comprising:

forming a protective film layer on ~~said~~ the micro-protrusions or ~~said~~ the micro-cavities.

78. (New) A method of manufacturing a slider member to be used in sliding relation to an other member, said slider member being a thrust bearing housing, said method comprising:

placing a cylindrical body of the thrust bearing housing in a process chamber;

disposing a plurality of wires arranged radially on a surface of the cylindrical body;

irradiating fast atomic beams toward the plurality of wires onto a surface of the cylindrical body, and forming micro-protrusions or micro-cavities, said forming comprising controlling said irradiating such that each micro-protrusion or micro-cavity has a top or bottom surface, respectively, and a side surface, with the side surface extending at an inclusive angle of from approximately 80° to approximately 110° to an intended direction of sliding of the slider member relative to the other member.

79. (New) A method of, during the manufacture of a slider member to be used in sliding relation to an other member, forming micro-protrusions on or micro-cavities in a surface of a substrate from which is formed the slider member, in a manner to reduce sticking between the surface and the other member and to reduce entrapment of foreign particles therebetween, said method comprising:

placing the substrate in a process chamber;

supporting a mask member in front of the surface of the substrate, the mask member disposed in contact with or in proximity of the substrate surface;

irradiating fast atomic beams through the mask member onto the surface of the substrate, and forming said micro-protrusions or said micro-cavities, said forming comprising controlling said irradiating such that each micro-protrusion or micro-cavity has a top or bottom surface, respectively,

and a side surface, with the side surface extending at an inclusive angle of from approximately 80° to approximately 110° to an intended direction of sliding of the slider member relative to the other member and to the surface of the substrate, wherein the micro-protrusions or micro-cavities are two-stage protrusions having a plurality of top-stage protrusions and lower-stage protrusions; and

forming a magnetic film layer and a protective film layer on the micro-protrusions or the micro-cavities.